



FORM MR-LMO  
(Revised 4/97)

**DRAFT**

FOR DIVISION USE ONLY

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DOGM Lead: TM

**STATE OF UTAH**  
**DEPARTMENT OF NATURAL RESOURCES**  
**DIVISION OF OIL, GAS AND MINING**  
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Box 145801  
Salt Lake City, Utah 84114-5801  
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### **NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS**

The informational requirements in this form are based on provisions of the Mined Land Reclamation Act, Title 40-8, Utah Code Annotated 1953, General Rules and Rules of Practice and Procedures.

**This form applies only to mining operations which disturb or will disturb more than five acres at any given time.**

"MINING OPERATIONS" means those activities conducted on the surface of the land for the exploration for, development of, or extraction of a mineral deposit, including, but not limited to, surface mining and the surface effects of underground and in situ mining, on-site transportation, concentrating, milling, evaporation, and other primary processing.

"Mining operation" does not include: the extraction of sand, gravel, and rock aggregate; the extraction of oil and gas as defined in Chapter 6, Title 40; the extraction of geothermal steam; smelting or refining operations; off-site operations and transportation; or reconnaissance activities which will not cause significant surface resource disturbance or involve the use of mechanized earth-moving equipment such as bulldozers or backhoes.

**PLEASE NOTE:**

*This form is to be used as a guideline in assembling the information necessary to satisfy the Large Mining Operations Notice of Intention requirements. You will need extra space to provide a majority of the information requested. Please provide the information on additional sheets and include cross-referenced page numbers as necessary. The operator may submit this information on an alternate form; however, the same or similar format must be used.*

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**I. Rule R647-4-104 - Operator(s), Surface and Mineral Owners.**

The operator must provide the name, address and telephone number of the individual or company who will be responsible for the proposed operation. If a company is to be listed as the operator, then the name of the corporate officers need to be provided.

1. Mine Name: Travertine #1
2. Name of Applicant or Company: B.E.G. Resources L.L.C.  
Corporation (X) Partnership ( ) Individual ( )
3. Permanent Address: B.E.G. Resources L.L.C.  
P.O. Box 361  
Nephi, UT 84648
4. Company Representative (or designated operator):  
Name: Neal R. Jensen  
Title: Managing Partner  
Address: P.O. Box 786 Santaquin, UT 84655  
Phone: (801) 754-5200
5. Location of Operation:  
County(ies) Juab  
\_\_\_\_ 1/4 of SE 1/4, Section: 14 Township: 14S Range: 3W  
\_\_\_\_ 1/4 of \_\_\_\_\_ 1/4, Section: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_  
\_\_\_\_ 1/4 of \_\_\_\_\_ 1/4, Section: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_

The names of the surface and mineral owners for any areas which are to be impacted by mining must be provided to the Division. This list should include all private, state and federal ownership and the owners of lands immediately adjacent to the project areas.

6. Ownership of the land surface (circle all that apply): Private (Pee),  
Public Domain (BLM), National Forest (USFS), State of Utah or other:

Name: BLM Address: Fillmore, UT  
Name: \_\_\_\_\_ Address: \_\_\_\_\_  
Name: \_\_\_\_\_ Address: \_\_\_\_\_  
Name: \_\_\_\_\_ Address: \_\_\_\_\_

7. Owner(s) of record of the minerals to be mined:

Name: Robert Steele Address: 1055 N. 400 E. Nephi, UT 84648  
Name: Max Steele Address: 296 N. Center Santaquin, UT 84655  
Name: Terry Steele Address: P.O. Box 353 Santaquin, UT 84655  
Name: \_\_\_\_\_ Address: \_\_\_\_\_

8. Have the above owners been notified in writing? Yes ✓ No \_\_\_\_\_

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If no, why not? \_\_\_\_\_

9. Does the operator have legal right to enter and conduct mining operations on the land covered by this notice? Yes ✓ No \_\_\_\_\_.

## II. Rule R647-4-105 - Maps, Drawings & Photographs

### 105.1 - Base Map

A complete and correct topographic base map (or maps) with appropriate contour intervals must be submitted with this notice showing all of the items on the following checklist. The scale should be approximately 1 inch = 2,000 feet (preferably a USGS 7.5 minute series or equivalent topographic map where available). The map(s) must show the location of lands to be affected in sufficient detail to allow measurement of the proposed area of surface disturbance.

#### Base Map Checklist

Please check off each section to verify these features are included on the map(s) or explain why it is not applicable.

		Map #
<u>✓</u>	(a) Property boundaries of surface ownership of all lands which are to be affected by the mining operations;	<u>A</u>
<u>✓</u>	(b) Perennial, intermittent, or ephemeral streams, springs and other bodies of water; roads, buildings, landing strips, electrical transmission lines, water wells, oil and gas pipelines, existing wells or boreholes, or other existing surface or subsurface facilities within 500 feet of the proposed mining operations;	<u>A</u>
<u>✓</u>	(c) Proposed route of access to the mining operations from nearest publicly maintained highway (Map scale appropriate to show access);	<u>A</u>
<u>✓</u>	(d) Known areas which have been previously impacted by mining or exploration activities within the proposed land affected;	<u>A</u>
<u>✓</u>	(e) Areas proposed to be disturbed or reclaimed over the life of the project or other suitable time period.	<u>A</u>

### 105.2 - Surface Facilities Map

#### Surface Facilities Map Checklist

Surface facilities maps should be provided at a scale of not less than 1" = 500'.

Please check off each section to verify these features are included on the map(s) or explain why it is not applicable.

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Map #

- ✓ (a) Proposed surface facilities, including but not limited to: buildings, stationary mining/processing equipment, roads, utilities, power lines, proposed drainage control structures, and the location of topsoil storage areas, overburden/waste dumps, tailings or processed waste facilities, disposal areas for overburden, solid and liquid wastes, and wastewater discharge treatment and containment facilities; A
- ✓ (b) A border clearly outlining the extent of the surface area proposed to be affected by mining operations, and the number of acres proposed to be affected; A
- ✓ (c) The location of known test borings, pits, or core holes. A

**105.3 - Additional Maps****Reclamation Treatments Map Checklist**

Please check off each section to verify these features are included on the map(s) or explain why it is not applicable.

Map #

- ✓ (a) Areas of the site to receive various reclamation treatments shaded, cross hatched or color coded to identify which reclamation treatments will be applied. Areas would include: buildings, stationary mining/processing equipment, roads, utilities, proposed drainage improvements or reconstruction, and sediment control structures, topsoil storage areas, waste dumps, tailings or processed waste facilities, disposal areas for overburden, solid and liquid wastes, ponds, and wastewater discharge, treatment and containment facilities. Reclamation treatments may include ripping, regrading, replacing soil, fertilizing, mulching, broadcast seeding, drill seeding, and hydroseeding; B
- ✓ (b) A border clearly outlining the extent of the area to be reclaimed after mining, the number of acres disturbed, and the number of acres proposed for reclamation; B
- ✓ (c) Areas disturbed by this operation which are included in a request for a variance from the reclamation standards; B
- ✓ (d) Highwalls which are proposed to remain steeper than 45 degrees and slopes which are proposed to remain steeper than 3 horizontal:1 vertical.

**Note:** By shading or other means areas included in sections c & d will need to be referenced in the variance request section.

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Additional maps and cross sections may be required in accordance with Rule R647-4-105.3. Design drawings and typical cross-sections for each tailings pond, sediment pond, or other major drainage control structures must also be included.

### III. Rule R647-4-106 - Operation Plan

106.1 - Mineral(s) to be mined: Limestone

106.2 - Type of Operation Conducted:

Describe the typical methods and procedures to be used in mining operations, on-site processing and concurrent reclamation. Include equipment descriptions where appropriate.

106.3 - Estimated Acreage

Acreage listed here should match areas measured off the maps provided.

Areas of actual mining:	<u>5 acres</u>
Overburden/waste dumps:	<u>NA</u>
Ore and product stockpiles:	<u>2 acres</u>
Access/haul roads	<u>NA</u>
Associated on-site processing facilities:	<u>NA</u>
Tailings disposal:	<u>NA</u>
Other - Please describe	<u>NA</u>
Total Acreage	<u>7 acres</u>

106.4 - Nature of material including waste rock/overburden and estimated tonnage

Describe the typical annual amount of the ore and waste rock/overburden to be generated, in cubic yards. Where does the waste material originate? What is the nature of the overburden/wastes (general chemistry/mineralogy and description of geologic origin)? Will it be in the form of fines or coarse material? What are the typical particle size and size fractions of the waste rock?

Thickness of overburden:	<u>0</u> ft.
Thickness of mineral deposit:	<u>35</u> ft.
Estimated annual volume of overburden:	<u>0</u> cu. yds.
Estimated annual volume of tailings/reject materials:	<u>0</u> cu. yds.
Estimated annual volume of ore mined:	<u>18,000</u> cu. yds.
Overburden/waste description:	<u>NA- There is no overburden at mine site.</u>

106.5 - Existing soil types, location of plant growth material

Specific information on existing soils to be disturbed by mining will be required. General soils information may not be sufficient.

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Provide specific descriptions of the existing soil resources found in the area. Soil types should be identified along with depth and extent, especially those to be directly impacted by mining.

**Soils** - The plan shall include an order 3 Soil Survey (or similar) and map. This information is needed to determine which soils are suitable for stockpiling for revegetation. This soil data may be available from the local Soil Conservation Service office, or if on public lands, from the land management agency. The map needs to be of such scale that soil types can be accurately determined on the ground (see Attachment I).

- (a) Each soil type to be disturbed needs to be field analyzed for the following:

Depth of soil material	<u>NA</u> inches
Volume (for stockpiling)	<u>NA</u> cu. yds.
Texture (field determination)	<u>NA</u>
pH (field determination)	<u>NA</u>
(cross reference with item 106.6)	

- (b) Where there are problem soil areas (as determined from the field examination) laboratory analysis may be necessary. Soil samples to be sent to the laboratory for analysis need to be about one quart in size, properly labeled, and in plastic bags. Each of the soil horizons on some sites may need to be sampled. Soil sample locations need to be shown on the soils map. Soil analysis for these samples should include: texture, pH, Ec (conductivity), CEC (Cation Exchange Capacity), SAR, % Organic Matter, Total N, Available Phosphorus (as  $P_2O_5$ ), Potassium (as  $K_2O$ ), and acid/base potential.

#### 106.6 - Plan for protecting and redepositing existing soils

Thickness of soil material to be salvaged and stockpiled:	<u>NA</u> inches
Area from which soil material can be salvaged: (show on map)	<u>NA</u> acres
Volume of soil to be stockpiled:	<u>NA</u> cu. yds.
(cross reference with item 106.5 (a))	

Describe how topsoil or subsoil material will be removed, stockpiled and protected.

#### 106.7 - Existing vegetative communities to establish revegetation success

**Vegetation** - The operator is required to return the land to a useful condition and reestablish at least 70 percent of the premining vegetation ground cover.

Provide the Division with a description of the plant species growing onsite and the percent vegetation cover for each plant community located on the site. Describe the methodology used to obtain these values.

The percent ground cover is determined by sampling the vegetation type(s) on the areas to be mined (see Attachment I for suggested sampling methods).

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- (a) Vegetation Survey - The following information needs to be completed based upon the vegetation survey:

Sampling method used  
Number of plots or transects

Re-vegetation from DAGM.

Ground CoverPercent

Vegetation (perennial grass, forb and shrub cover)

Litter

Rock/rock fragments

Bare ground

100%

Revegetation Requirement  
(70 percent of above vegetation figure)

100 %

Indicate the vegetation community(ies) found at the site.

List the predominant perennial species of vegetation growing in each vegetation community type.

sagebrush

Cedar trees

- (b) Photographs - The operator may submit photographs (prints) of the site to show existing vegetation conditions. These photographs should show the general appearance and condition of the area to be affected and may be utilized for comparison upon reclamation of the site. Photographs should be clearly marked as to the location, orientation and the date they were taken.

**106.8 - Depth to groundwater, overburden material & geologic setting**

Describe the approximate depth to groundwater in the vicinity of the operation based on the completion of any monitoring or water wells in the area. Please show the location of these wells on the base map.

Depth to groundwater

NA ft.

Provide a narrative description of the geology of the area and/or a geologic cross section.

**106.9 - Location and size of ore and waste stockpiles, tailings and treatment ponds, and discharges**

Describe the location and size of any proposed waste/overburden dumps, stockpiles, tailings facilities and water storage or treatment ponds.

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Describe how overburden material will be removed and stockpiled.

Describe how tailings, waste rock, rejected materials, etc. will be disposed of.

Describe the acreage and capacity of waste dumps, tailings ponds and water storage ponds to be constructed. All impoundments must include the necessary hydrologic calculations to determine if they are adequately sized to handle storm events.

Describe any proposed effluent discharge points (UPDES) and show their location on the surface facilities map. Give the proposed discharge rate and expected water quality. Attach chemical analyses of such discharge if available.

#### **IV. R647-4-107 - Operation Practices**

During operations, the operator shall conform to the practices listed under this section of the Minerals Rules unless the Division grants a variance in writing.

Identify any potentially deleterious materials that may be stored on site (including fuel, oil, processing chemicals, etc.) and describe how they will be handled and stored.

Please describe any contemporaneous reclamation that will be done prior to final closure. Reference these areas on a map.

#### **V. Rule R647-108 - Hole Plugging Requirements**

All drill holes which will not eventually be consumed by mining must be plugged according to the methods listed in this section. Describe the location of any aquifers encountered by drilling and the method to be used to plug such water containing holes. Describe the method to be used for plugging holes not containing water.

#### **VI. Rule R647-109 - Impact Statement**

Please provide a general narrative description identifying potential surface and/or subsurface impacts. Where applicable, this description should include potential impacts to: surface and groundwater systems, threatened or endangered species or their critical habitats, existing soil resources for reclamation, slope stability, erosion control, air quality, and public health and safety.

##### **109.1 - Surface and groundwater systems**

Describe any impacts to surface or groundwater that could arise from this mining operation. How will these impacts be monitored and mitigated? The appropriate groundwater and surface water permits need to be obtained from the Division of Water Quality. Please reference any such permits.

##### **109.2 - Wildlife habitat and endangered species**

Describe the impacts on wildlife habitat associated with this operation. Are big game species found in the area? Is the area associated with riparian habitat? If so, what will the



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impacts be on riparian areas? Is waterfowl associated in some way with this site, either as a fly-over, temporary resident or permanent resident.

List any threatened or endangered wildlife species found in the area. Discuss impacts to threatened or endangered species and their habitats.

**109.3 - Existing soil and plant resources**

Explain how the operation might impact existing soil and plant resources in the area to be affected. Are there riparian or wetland areas which will be affected by mining? Will these areas be rehabilitated or will the operation result in permanent impacts? Are there any threatened or endangered plant species in the affected areas?

**109.4 - Slope stability, erosion control, air quality, public health & safety**

Describe the possible impacts of this mining operation on slope stability, erosion, air quality, public health and safety. Include descriptions of highwalls and slope configurations and their stability.

The operator needs to establish the fact that an air quality permit has already been obtained or has been applied for. Explain the status of this permit and its requirements in relation to your operation.

**109.5 - Actions proposed to mitigate any of the above impacts**

The operator must address this section if impacts to any of the above categories will occur.

**VII. Rule R647-4-110 - RECLAMATION PLAN****110.1 - Current land use and postmining land use**

Current or premining land use(s) [other than mining]: grazing

List future post-mine land-use(s) proposed: grazing

(Develop the reclamation plan to meet proposed post-mine land use.)

**110.2 - Reclamation of roads, highwalls, slopes, leach pads, dumps, etc.**

Describe how the following features will be reclaimed: roads, highwalls, slopes, impoundments, drainages and natural drainage patterns, pits, ponds, dumps, shafts, adits, drill holes and leach pads. Describe the configuration of these features after final reclamation. Describe the rinsing and neutralization of leach pads associated with final decommissioning.

Reclamation plans for impoundments, pits, ponds shall include:

- 1) The final elevations and final disposition of the drainage in and around the impoundment. If the impoundment, pit, or pond is intended to be left as part of the

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post-mining land use, then an agreement with the land managing agency is required, if appropriate.

- 2) The final size of the impoundment, pit, pond in acre-feet of storage is required, as well as, the capacity of the spillway to safely pass storm events.
- 3) Impoundments, pits, and ponds, where not needed or approved as part of the post mining land use, shall be reclaimed, free draining, and the natural drainage patterns restored.

Reclamation plans for drainages shall include:

- 1) The reestablishment of a natural drainage pattern which fits in with the upstream and downstream cross-section of existing drainage in the vicinity of the disturbance.
- 2) The reestablishment of a stable channel in the reclaimed reach of channel, using the necessary armouring to prevent excessive erosion and downstream sedimentation.
- 3) Cross-sections and profiles of reestablished channels will be required when drainages are being reclaimed to demonstrate compatibility with existing drainage characteristics.

Reclamation plans for drill holes and leach pads shall include:

- 1) A demonstration that the requirements of R647-109.1 will be met. This shall include but not be limited to: detailed plans to decommission all heap leach pads and plans to adequately plug all drill holes.
- 2) Any heap leach operations will provide the necessary surface water and ground water quality data to demonstrate that impacts to these resources will not occur following mining and reclamation.

**NOTE:** The Minerals Rules require overall highwall of no more than 45° at final reclamation unless a variance is granted. All dump or fill slopes should be left at an angle of 3h:1v or less. Any slopes steeper than 3h:1v must be reclaimed using state-of-the-art surface stabilization technology. Pit benches exceeding 35 feet in width should be topsoiled, or covered with fines, and revegetated.

Backfilling and Grading

Describe equipment and methods to be used in any backfilling or regrading operations. Describe the amount of materials to be moved and final disposition of any stockpiled materials.

**110.3 - Surface facilities to be left**

Describe any surface facilities which are proposed to remain on-site after reclamation (buildings, utilities, roads, drainage structures, impoundments, etc.). Describe their post-mine application. *Justification for not reclaiming these facilities must be included in the variance request section.*

**110.4 - Treatment, location and disposition of deleterious materials**

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Describe the nature and extent of any hazardous materials located on-site.

Describe how hazardous materials will be neutralized, removed from the site, or buried on site.

Disposal of Trash

Describe how buildings, foundations, trash and other waste materials will be disposed of.

**110.5 - Revegetation planting program and topsoil redistribution**

Describe the revegetation tasks to be performed in detail. For example, will ripping, mulching, fertilizing, seeding and scarifying of these areas be performed and if so, how will this be accomplished? Will topsoil be used? If so, to what depth, and what type of amendments might be applied to the topsoil? Correlate this information with the Reclamation Treatments Map.

Provide a seed mix listing adaptable plant species that will be used at the site for reclamation. More than one seed mix may be needed, depending upon the areas to be reclaimed. Keep the proposed post-mining land use in mind when developing seed mixes.

a) Soil Material Replacement

In order to reestablish the required ground cover, one to two feet (depending on underlying material) of suitable soil material usually has to be redistributed on the areas to be reseeded. If the stockpiled soil isn't sufficient for this, soil borrow areas will need to be located.

How much soil material will be placed on the area to be reseeded? Where will this material come from? How will the material be transported and spread?

b) Seed Bed Preparation

Describe how the seedbed will be prepared and equipment to be used. The Division recommends ripping or disking to a minimum of 12 inches and leaving the seed bed surface in as roughened condition as possible to enhance water harvesting, erosion control and revegetation success. Compacted surfaces such as roads and pads should be deep ripped a minimum of 18 inches.

c) Seed Mixture - List the species to be seeded:

Example

<u>Species Name</u>	<u>Common Name</u>	<u>Seeding Rate</u> <u>(lbs Pure Live Seed/Acre)</u>
obtained from D.O.G.M. - M/023/024		
	Total lbs/acre	13 lbs/acre

(The Division recommends seeding 12-15 lbs./acre of native and introduced adaptable species of grass, forb, and browse seed for drill seeding and 15-20 lbs./acre for broadcast or hydro seeding. The Division can provide assistance in developing reclamation seed mixes if requested).

**DRAFT****d) Seeding Method**

Describe method of planting the seed.

The Division recommends planting the seed with a rangeland or farm drill. If broadcast seeding, harrow or rake the seed 1/4 to 1/2 inch into the soil. Fall is the preferred time to seed.

**e) Fertilization**

Describe fertilization method, type(s) and application rate.

**f) Other Revegetation Procedures**

Please describe other reclamation procedures, such as mulching, irrigation, hydroseeding, etc., that may be planned.

**VIII. Rule R647-4-112 VARIANCE**

The operator may request a variance from Rules R647-4-107 (Operation Practices), R647-4-108 (Hole Plugging), and R647-4-111 (Reclamation Practices) by submitting the following information:

- 1.11 the rule(s) which a variance is requested from; (rule number and content)
- 1.12 a description of the specific variance requested and a description of the area affected by the variance request; show this area on the Reclamation Treatments Map(s).
- 1.13 justification for the variance;
- 1.14 alternate methods or measures to be utilized in the variance area.

Variance requests are considered on a site-specific basis. For each variance requested, attach a narrative which addresses the four items listed above.

**IX. Rule R647-4-113 - SURETY**

A Reclamation surety must be provided to the Division prior to final approval of this application. In calculating this amount, include the following major tasks:

- 1) Clean-up and removal of structures.
- 2) Backfilling, grading and contouring.
- 3) Soil material redistribution and stabilization.
- 4) Revegetation (preparation, seeding, mulching).
- 5) Safety gates, berms, barriers, signs, etc.
- 6) Demolition, removal or burial of facilities/structures, regrading/ripping of facilities areas.
- 7) Regrading, ripping of waste dump tops and slopes.
- 8) Regrading/ripping stockpiles, pads and other compacted areas.
- 9) Ripping pit floors and access roads.
- 10) Drainage reconstruction.
- 11) Mulching, fertilizing and seeding the affected areas.
- 12) General site clean up and removal of trash and debris.

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- 13) Removal/disposal of hazardous materials.
- 14) Equipment mobilization.
- 15) Supervision during reclamation.

To assist the Division in determining a reasonable surety amount, please attach a reclamation cost estimate which addresses each of the above steps. The areas and treatments included in the reclamation treatments map should correspond with items included in the reclamation cost estimate. The reclamation costs used by the Division must be third party costs.

**X. SIGNATURE REQUIREMENT**

I hereby certify that the foregoing is true and correct.

Signature of Operator/Applicant: Neal R. Jensen

Name (typed or print): Neal R. Jensen

Title/Position (if applicable): Managing Partner

Date: March 5, 1998

**PLEASE NOTE:**

Section 40-8-13(2) of the Mined Land Reclamation Act provides for maintenance of confidentiality concerning certain portions of this report. Please check to see that any information desired to be held confidential is so labeled and included on separate sheets or maps.

Only information relating to the location, size or nature of the deposit may be protected as confidential.

Confidential Information Enclosed: ( ) Yes ( ) No

**DRAFT****Attachment I****Vegetation Cover Sampling**

Vegetation cover sampling determines the amount of ground that is covered by live vegetation. It is divided into four categories which equal 100 percent. They are:

**Vegetation** - This is the live perennial vegetation. Care should be taken to avoid sampling in disturbed areas that have a large percentage of annual or weedy vegetation, such as cheatgrass and russian thistle.

**Litter** - This is the dead vegetation on the ground, such as leaf and stem litter.

**Rock/rock fragments** - This is the rock and rock fragments on the soil surface.

**Bare ground** - This is the bare soil which is exposed to wind and water erosion.

**Cover Sampling** - The following methods are acceptable:

**Ocular Estimation**

This method visually estimates the percentage of ground covered in a plot by the four components. Plot size is usually a meter or yard square or a circular plot 36 inches in diameter. Ten to twenty plots should be randomly sampled in each major vegetation type.

**Line Intercept**

Percent ground cover is obtained by stretching a tape measure (usually 100') over the ground and then recording which of the four components is under each foot mark. At least ten of these transects should be randomly laid out and measured in each major vegetation type.

**Soil Survey and Sampling Methods**

If a SCS or land management agency soil survey is not available, the operator shall delineate all soil types that will be disturbed by mining on a map. Each soil type shall be sampled for its characteristics and inherent properties. Representative sampling locations should have similar geologic parent material, slopes, vegetative communities and aspects. The sampling locations should be representative of the soil type and be identified on the map. Sampling shall be at a minimum of one for each soil type disturbed.

The soil map needs to be of sufficient scale so that each soil type can be accurately located on the ground.



